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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,036	01/25/2002	Bernard Barink	TI-32595	3455

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EXAMINER

AU, SCOTT D

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,036

Applicant(s)

BARINK, BERNARD

Examiner

Scott Au

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

The application of Barink for a "RFID systems-antenna and software method to spatially locate transponders" filed January 25, 2002 has been examined.

Claims 1-12 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 10 are rejected under 35 U.S.C. 102(e) as being unpatentable over by Moore (US# 2003/0001725)

Referring to claim 1, Moore discloses an apparatus for locating an RFID transponder vertical location comprising:

an RFID transponder (19) (i.e. RFID tag) for broadcasting identification data (page 3 paragraph 49);

a plurality of antennae (18) (i.e. an antenna at each shelf location) for recovering said identification data broadcast by said RFID transponder (19) (i.e. RFID tag) (page 3 paragraph 46);

a plurality of support members (14,16) (i.e. support locations) at spaced apart vertical locations suitable for supporting said RFID transponder (19) (i.e. RFID tag), and each of said spaced apart support members associated with at least one of said plurality of antennae (page 3 paragraph 45; see Figures 1A-2); and

control circuitry (102) (i.e. control module) connected to said plurality of antenna (18) (i.e. an antenna at each shelf location) for determining which of said plurality of antenna receives said identification broadcast from said RFID transponder (19) (i.e. RFID tag) and for determining the location of said RFID transponder as a function of the antenna (18) (i.e. an antenna at each shelf location) receiving said broadcast data and the support members (14,16) (i.e. support locations) associated with the antennae(18) (i.e. an antenna at each shelf location) receiving said identification data (pages 3-4 paragraphs 49-51; see Figures 2-3).

Referring to claim 2, Moore discloses an apparatus of claim 1, wherein at least two transponders (19) (i.e. RFID tags) broadcast separate identification data (page 3 paragraphs 49-50).

Referring to claim 3, Moore discloses an apparatus of claim 1, wherein said antenna or loop antennas (18) (i.e. antennae) and the plane of the loop of the antenna

Art Unit: 2635

is substantially coplanar with said support member (page 3 paragraph 45; see Figure 1A) (i.e. Figure 1A shown antenna (18) is coplanar to each support member (14 and 16).

Referring to claim 4, Moore discloses an apparatus of claim 1, wherein each of said support members (14,16) (i.e. support locations) includes at least two antennae (18) (i.e. antennae) located side by side, and wherein both the vertical and horizontal location of the transponder is determined (page 3 paragraphs 45-46; see Figures 1A-2).

Referring to claim 5, Moore discloses an apparatus of claim 1, wherein said RFID transponders (19) (i.e. RFID tags) are attached to a product or package (page 3 paragraph 44; see Figures 1A-2).

Referring to claim 6, Moore discloses an apparatus of claim 1, further comprising a multiplicity of products or packages and a multiplicity of RFID transponders (19) (i.e. RFID tags), each transponder for broadcasting different identification data, and at least one each associated with said multiplicity of products or packages (12) (i.e. plurality of containers) (page 3 paragraph 46 and 49-50; see Figure 2).

Referring to claim 7, Moore discloses an apparatus of claim 1, wherein said support members at known vertical locations are a plurality of shelves stacked vertically (i.e. see Figure 2).

Referring to claim 8, Moore discloses an apparatus of claim 1, wherein each of said shelves has two or more horizontal locations (14,16) (i.e. support locations) for supporting products or packages (12) (i.e. plurality of containers) to which a transponder (19) (i.e. RFID tag) is attached, each shelf has an antenna (18) (i.e. antenna) corresponding to said each of said horizontal locations, and wherein both the vertical and horizontal location of the transponder is determined (page 3 paragraphs 45-46; see Figures 1A-2) .

Referring to claim 10, Moore discloses an apparatus of claim 1 wherein said RFID transponder stores power transmitted by one or more of said antennas for use to provide said transmitted identification data (page 4 paragraph 51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US# 2003/0001725) as applied to claim 1 above, and further in view of Bauer et al. (US# 2003/0174099).

Referring to claim 9, Moore discloses the apparatus of claim 1. However Moore did not explicitly disclose further including a multiplexer connected between said control circuitry and said plurality of antennas for selecting a pair of adjacent antennas.

In the same field of endeavor of inventory control system, Bauer et al. disclose a multiplexer connected between said control circuitry and said plurality of antennas for selecting a pair of adjacent antennas (page 1 paragraph 9; see Figure 2) in order to improve the spatial coverage when reading tags.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include a multiplexer connected between said control circuitry and said plurality of antennas for selecting a pair of adjacent antennas disclosed by Bauer et al. into RFID tracking system of Moore with the motivation for doing so would allow the control system to locate products or packages with an RFID tag attached.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US# 2003/0001725) as applied to claim 1 above, and further in view of Zimmerman et al. (US# 6,046,682).

Referring to claim 11, Moore discloses the apparatus of claim 1. However, Moore did not explicitly disclose further comprising computer circuitry for averaging the vertical location of antennae reading said transponder.

In the same field of endeavor of electronic labeling system, Zimmerman et al. teach a computer circuitry for averaging the vertical location of antennae reading said transponder (col. 4 lines 53-64) in order to determine the location of the EPL by the antenna of signal strength.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include the EPL locator software averaging signal strength information for the last of antennas disclosed by Zimmerman et al. into control module of Moore with the motivation for doing so would allow the tracking of an RFID transponder is located.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US# 2003/0001725) in view of Bauer et al. (US# 2003/0174099).

Referring to claim 12, Moore discloses the method of locating an RFID transponder in space comprising the steps of:
broadcasting identification data from an RFID transponder (19) (i.e. RFID tag) (page 3 paragraph 49); receiving said broadcast identification data at a plurality of antenna (18) (i.e. antennas) (page 3 paragraph 49); providing a plurality of spaced apart support members at known vertical locations suitable for

supporting said RFID transponders (19) (i.e. RFID tags), and each of said spaced apart support members associated with at least one of said plurality of antennas (page 3 paragraph 45-46; see Figures 1A-2);
determining which antenna receive identification data broadcast from said RFID transponder (page 3 paragraph 48; see Figure 3); and
determining the location of said transponder (19) (i.e. RFID tag) broadcasting said identification data as a function of the antennas (18) (i.e. antennas) receiving said information data and the support members(14,16) (i.e. support locations) associated with the antennas (18) (i.e. antennas) receiving said identification data (page 3 paragraphs 48-49; see Figure 3).

However, Moore did not explicitly disclose that it is a three-dimensional location determining.

In the same field of inventory control system, Bauer et al. disclose determining in a three-dimensional location (page 10 paragraph 118) of tags read by RFID reader.

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include an RFID reader that would detect tags in a three-dimensional arrangement disclosed by Bauer et al. into RFID tags tracking system of Moore with the motivation for doing so would allow a three-dimensional detecting of RFID tags.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tuttle (US# 5,914,671) discloses system and method for locating individual and equipment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Au whose telephone number is (703) 305-4680.

The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached at (703) 305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Scott Au



MICHAEL HORABIK
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